

September 5, 2012

Mr. Mark Nations  
The Doe Run Company  
P.O. Box 1633  
Desloge, Missouri 63601

**Re: Ambient Air Monitoring Report – National Site**

Dear Mr. Nations:

Please find attached the Second Quarter 2012 “*Ambient Air Monitoring Report*” for The Doe Run Company at the National Industries, Inc. Reclamation Area Sites, located near Park Hills, Missouri.

This report will include the following:

- **Glossary of Terms** – Listing of the abbreviations used for each parameter and unit.
- **National Ambient Air Quality Standards** – Lists the maximum allowable concentrations for the measured parameters.
- **Quarterly Missing Data Summary** – Listing of missing particulate run days.
- **Quarterly Data Summary** – Includes the averages of each monitored parameter, which relates to the federal standard.

Barr Engineering Company offers this report as an independent laboratory. This includes the weighing of filters, obtaining lead and cadmium analysis, compiling the data, and preparing the report. No interpretation of the data or analysis of the results is implied or intended. Should you have any questions regarding this report, please call.

Respectfully,



Richard J. Campbell, PE  
Chemical Engineer  
Senior Environmental Consultant

c: Ms. Kathy Rangen  
Mr. Jason Gunter  
Mr. Ty Morris  
Mr. Kevin Lombardozzi

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## ***Ambient Air Monitoring Report***

***National Industries, Inc. Reclamation Area Site  
Park Hills, Missouri***

***The Doe Run Company***

***Second Quarter 2012***



**RECEIVED**

SEP 10 2012

SUPERFUND DIVISION

## ***Ambient Air Monitoring Report***

***National Industries, Inc. Reclamation Area Site  
Park Hills, Missouri***

***The Doe Run Company***

***Second Quarter 2012***



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## GLOSSARY OF TERMS

$\mu\text{g}/\text{m}^3$	Micrograms per Cubic Meter
TSP	Total Suspended Particulate
PM <sub>10</sub>	Particulate Matter - 10 Microns or Less
mmHg	Millimeters of Mercury

## NATIONAL AMBIENT AIR QUALITY STANDARDS (NAAQS)

PM <sub>10</sub> – Particulate Matter	24-Hour*	Annual Maximum	150 $\mu\text{g}/\text{m}^3$
Lead	Calendar Quarter	Arithmetic Mean	1.5 $\mu\text{g}/\text{m}^3$

TSP (Total Suspended Particulate) – There are no Federal Standards that apply solely for TSP.

\*This standard must be exceeded more than once a year to constitute a violation.

## QUARTERLY MISSING DATA SUMMARY

### TSP/Lead Summary

National Site Soccer #2 – 4/24/2012 –INVALID – Mechanical Failure

National Site #1 – 4/30/2012 –Blank Filter QA

All Sites – 5/28/2012 – Holiday – No samples scheduled

Big River Site #4 QA – 6/7/2012 – INVALID – Mechanical Failure

All Sites – 6/28/2012 – Training – No samples scheduled

### PM<sub>10</sub> Summary

Big River Site #4 – 4/21/2012 –INVALID – Mechanical Failure

National Site #1 – 4/30/2012 –Blank Filter QA

*Particulate and Lead Quarterly Summary*



## TSP and Lead Concentration Summary

National  
Park Hills, Missouri

2012

Date	TSP Big River #4 ( $\mu\text{g}/\text{m}^3$ )	TSP Ozark #1 ( $\mu\text{g}/\text{m}^3$ )	TSP Soccer #2 ( $\mu\text{g}/\text{m}^3$ )	TSP Water Plant #3 ( $\mu\text{g}/\text{m}^3$ )	LEAD Big River #4 ( $\mu\text{g}/\text{m}^3$ )	LEAD Ozark #1 ( $\mu\text{g}/\text{m}^3$ )	LEAD Soccer #2 ( $\mu\text{g}/\text{m}^3$ )	LEAD Water Plant #3 ( $\mu\text{g}/\text{m}^3$ )
4/2/12	78	64	60	63	0.040	0.010	0.033	0.017
4/3/12	31	30	22	31	0.007	0.012	0.008	0.007
4/4/12	33	28	29	32	0.012	0.006	0.009	0.010
4/5/12	35	22	23	24	0.010	0.000	0.007	0.006
4/6/12	22	27	22	21	0.006	0.011	0.010	0.000
4/9/12	36	25	26	23	0.033	0.011	0.024	0.011
4/10/12	37	30	39	33	0.038	0.007	0.058	0.039
4/11/12	44	36	41	33	0.029	0.014	0.018	0.016
4/12/12	51	50	39	43	0.008	0.000	0.010	0.013
4/13/12	38	38	41	44	0.000	0.000	0.007	0.000
4/16/12	24	24	20	23	0.008	0.006	0.015	0.048
4/17/12	18	14	14	14	0.010	0.008	0.009	0.006
4/18/12	22	22	17	17	0.009	0.008	0.012	0.008
4/19/12	37	36	35	35	0.020	0.010	0.013	0.009
4/20/12	21	11	18	13	0.000	0.000	0.000	0.000
4/23/12	28	34	25	20	0.024	0.026	0.043	0.018
4/24/12	38	43	INVALID	41	0.017	0.038	INVALID	0.046
4/25/12	52	63	55	44	0.016	0.013	0.022	0.009
4/26/12	48	41	43	95	0.020	0.006	0.023	0.041
4/27/12	35	33	35	33	0.012	0.000	0.011	0.017
4/30/12	24	19	19	19	0.012	0.000	0.008	0.011
Monthly Average	36	33	31	33	0.016	0.009	0.017	0.016

QUARTERLY LEAD NAAQS LIMIT: 1.5  $\mu\text{g}/\text{m}^3$

Please see the particulate analysis sheets for explanations of missing or invalid data.

Note: A summary of the Big River #4 sampler data is also included, because it was part of the QA plan.



## TSP and Lead Concentration Summary

National  
Park Hills, Missouri

2012

Date	TSP Big River #4 ( $\mu\text{g}/\text{m}^3$ )	TSP Ozark #1 ( $\mu\text{g}/\text{m}^3$ )	TSP Soccer #2 ( $\mu\text{g}/\text{m}^3$ )	TSP Water Plant #3 ( $\mu\text{g}/\text{m}^3$ )	LEAD Big River #4 ( $\mu\text{g}/\text{m}^3$ )	LEAD Ozark #1 ( $\mu\text{g}/\text{m}^3$ )	LEAD Soccer #2 ( $\mu\text{g}/\text{m}^3$ )	LEAD Water Plant #3 ( $\mu\text{g}/\text{m}^3$ )
5/1/12	34	40	42	37	0.000	0.028	0.012	0.029
5/2/12	31	34	34	44	0.011	0.009	0.023	0.076
5/3/12	24	29	29	38	0.009	0.007	0.015	0.073
5/4/12	32	35	38	38	0.020	0.023	0.027	0.049
5/7/12	21	17	24	17	0.011	0.000	0.009	0.000
5/8/12	42	28	31	21	0.044	0.011	0.037	0.016
5/9/12	35	20	20	20	0.040	0.007	0.013	0.027
5/10/12	39	34	26	27	0.019	0.009	0.014	0.029
5/11/12	30	28	35	26	0.017	0.012	0.028	0.016
5/14/12	43	38	38	41	0.036	0.018	0.027	0.050
5/15/12	45	44	33	41	0.036	0.017	0.016	0.071
5/16/12	57	45	63	49	0.024	0.011	0.070	0.039
5/17/12	47	40	40	37	0.027	0.013	0.020	0.016
5/18/12	42	52	43	39	0.020	0.029	0.040	0.030
5/21/12	25	22	29	23	0.007	0.000	0.026	0.014
5/22/12	39	29	31	28	0.035	0.013	0.023	0.015
5/23/12	31	41	49	31	0.006	0.012	0.060	0.000
5/24/12	95	135	130	105	0.044	0.086	0.189	0.034
5/25/12	54	55	48	48	0.022	0.018	0.023	0.014
5/29/12	51	23	29	24	0.060	0.007	0.021	0.011
5/30/12	32	26	28	21	0.021	0.013	0.022	0.024
5/31/12	27	20	31	15	0.021	0.000	0.037	0.000
Monthly Average	40	38	40	35	0.024	0.016	0.034	0.029

QUARTERLY LEAD NAAQS LIMIT:  $1.5 \mu\text{g}/\text{m}^3$

Please see the particulate analysis sheets for explanations of missing or invalid data.

Note: A summary of the Big River #4 sampler data is also included, because it was part of the QA plan.



## TSP and Lead Concentration Summary

National  
Park Hills, Missouri

2012

Date	TSP Big River #4 ( $\mu\text{g}/\text{m}^3$ )	TSP Ozark #1 ( $\mu\text{g}/\text{m}^3$ )	TSP Soccer #2 ( $\mu\text{g}/\text{m}^3$ )	TSP Water Plant #3 ( $\mu\text{g}/\text{m}^3$ )	LEAD Big River #4 ( $\mu\text{g}/\text{m}^3$ )	LEAD Ozark #1 ( $\mu\text{g}/\text{m}^3$ )	LEAD Soccer #2 ( $\mu\text{g}/\text{m}^3$ )	LEAD Water Plant #3 ( $\mu\text{g}/\text{m}^3$ )
6/1/12	31	17	12	16	0.039	0.006	0.008	0.013
6/4/12	70	26	21	30	0.053	0.007	0.008	0.020
6/5/12	38	25	47	34	0.018	0.000	0.059	0.025
6/6/12	37	24	144	29	0.014	0.000	0.072	0.038
6/7/12	39	29	81	37	0.020	0.010	0.055	0.039
6/8/12	38	24	33	37	0.033	0.009	0.022	0.074
6/11/12	21	18	20	20	0.012	0.000	0.017	0.000
6/12/12	50	23	24	27	0.045	0.000	0.015	0.011
6/13/12	40	42	28	25	0.021	0.013	0.016	0.012
6/14/12	51	33	32	28	0.057	0.016	0.020	0.013
6/15/12	33	34	35	36	0.017	0.012	0.016	0.017
6/18/12	32	39	50	33	0.000	0.040	0.048	0.009
6/19/12	27	34	60	27	0.007	0.032	0.147	0.016
6/20/12	29	34	44	31	0.012	0.038	0.043	0.011
6/21/12	59	29	36	34	0.098	0.013	0.054	0.050
6/22/12	33	28	27	27	0.031	0.012	0.022	0.010
6/25/12	50	30	42	42	0.028	0.000	0.057	0.024
6/26/12	40	29	40	36	0.028	0.008	0.052	0.018
6/27/12	35	44	35	50	0.016	0.024	0.026	0.029
6/29/12	72	56	42	65	0.069	0.020	0.017	0.096

Monthly Average	41	31	43	33	0.031	0.013	0.039	0.026
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Quarterly Average	39	34	38	34	0.024	0.013	0.030	0.024
					QUARTERLY LEAD NAAQS LIMIT: 1.5 $\mu\text{g}/\text{m}^3$			

Please see the particulate analysis sheets for explanations of missing or invalid data.

Note: A summary of the Big River #4 sampler data is also included, because it was part of the QA plan.

*PM<sub>10</sub> Quarterly Summary*



## Particulate Summary

National  
Park Hills, Missouri

2012

Date	PM <sub>10</sub> Big River #4 ( $\mu\text{g}/\text{m}^3$ )	PM <sub>10</sub> Ozark #1 ( $\mu\text{g}/\text{m}^3$ )	PM <sub>10</sub> Soccer #2 ( $\mu\text{g}/\text{m}^3$ )	PM <sub>10</sub> Water Plant #3 ( $\mu\text{g}/\text{m}^3$ )	PM <sub>10</sub> NAAQS ( $\mu\text{g}/\text{m}^3$ )
3-Apr	21	19	17	18	150
6-Apr	12	12	11	11	150
9-Apr	19	15	16	16	150
12-Apr	20	17	16	17	150
15-Apr	40	40	42	34	150
18-Apr	11	10	11	10	150
21-Apr	INVALID	9	10	8	150
24-Apr	14	17	14	14	150
27-Apr	25	22	22	30	150
30-Apr	15	15	14	14	150
Monthly Average	20	17	18	17	

Please see the particulate analysis sheets for explanations of missing or invalid data.

Note: A summary of the Big River #4 sampler data is also included, because it was part of the QA plan.



## Particulate Summary

National  
Park Hills, Missouri

2012

Date	PM <sub>10</sub> Big River #4 ( $\mu\text{g}/\text{m}^3$ )	PM <sub>10</sub> Ozark #1 ( $\mu\text{g}/\text{m}^3$ )	PM <sub>10</sub> Soccer #2 ( $\mu\text{g}/\text{m}^3$ )	PM <sub>10</sub> Water Plant #3 ( $\mu\text{g}/\text{m}^3$ )	PM <sub>10</sub> NAAQS ( $\mu\text{g}/\text{m}^3$ )
3-May	10	11	12	14	150
6-May	21	21	21	20	150
9-May	16	11	11	11	150
12-May	19	17	19	18	150
15-May	20	16	16	19	150
18-May	24	26	23	21	150
21-May	18	15	15	16	150
24-May	39	36	41	31	150
27-May	19	21	21	19	150
30-May	15	12	12	11	150
Monthly Average	20	19	19	18	

Please see the particulate analysis sheets for explanations of missing or invalid data.

Note: A summary of the Big River #4 sampler data is also included, because it was part of the QA plan.



## Particulate Summary

### National Park Hills, Missouri

2012

Date	PM <sub>10</sub> Big River #4 ( $\mu\text{g}/\text{m}^3$ )	PM <sub>10</sub> Ozark #1 ( $\mu\text{g}/\text{m}^3$ )	PM <sub>10</sub> Soccer #2 ( $\mu\text{g}/\text{m}^3$ )	PM <sub>10</sub> Water Plant #3 ( $\mu\text{g}/\text{m}^3$ )	PM <sub>10</sub> NAAQS ( $\mu\text{g}/\text{m}^3$ )
2-Jun	9	9	8	7	150
5-Jun	16	11	12	14	150
8-Jun	21	18	19	19	150
11-Jun	18	11	13	14	150
14-Jun	20	15	15	14	150
17-Jun	14	11	11	11	150
20-Jun	14	15	15	13	150
23-Jun	18	14	15	15	150
26-Jun	18	12	18	14	150
29-Jun	33	34	28	36	150
Monthly Average	18	15	15	16	
Quarterly Average	19	17	17	17	

Please see the particulate analysis sheets for explanations of missing or invalid data.

Note: A summary of the Big River #4 sampler data is also included, because it was part of the QA plan.

## ***Quarterly Quality Control***



120 East Davis Street  
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Fayette, MO 65248-0030

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## ANALYSIS REPORT

### Client Information:

Barr Engineering  
5150 W. 76th Street  
Edina, MN 55439

**Project Name:** Quarterly QC Samples  
**Quarter-Year:** Q2-2012  
**Sample Matrix:** Filter

**Analysis Method:** 40 CFR §58 Appendix A/40 CFR §50 Appendix G

Lab Number	Observed Value	Actual Value	Difference		% Difference		Standard Deviation	95% Probability	95% Probability	Analyst-Date
	(µg Pb/Filter)	(µg Pb/Filter)	(+/-)	(%)	Average (%)	Limit (+)	Limit (-)			
20A	19.646	20	-0.354	-1.770%						DS-04/27/12
20B	19.230	20	-0.770	-3.850%						DS-05/29/12
20C	19.871	20	-0.129	-0.645%	-2.088%	1.626%	1.099%	-5.275%		DS-06/29/12
60A	57.654	60	-2.346	-3.910%						DS-04/27/12
60B	59.187	60	-0.813	-1.355%						DS-05/29/12
60C	57.147	60	-2.853	-4.755%	-3.340%	1.770%	0.130%	-6.810%		DS-06/29/12

Submitted by:

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Jennifer Vandelicht  
Quality Assurance

07/03/2012

Date

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